PATENT CLAIMS

1. A machining system (1) for cutting cylinder heads (3), in particular cylinder heads for passenger cars,
   - with a plurality of machining stations (2a-2f), in which the cylinder heads to be machined are machined in different orientations (OP20-OP120),
   - the cylinder heads to be machined being fed sequentially to the machining stations (2a-2f),
   - each machining station (2a-2f) comprising one or more identical machine tools (9-14),
   - and each machine tool (9-14) comprising a plurality of tool spindles (7, 7'), at least some of which are equipped permanently with a tool (8, 8').

2. The machining system as claimed in claim 1, characterized in that at least some of the tool spindles (7') are arranged in the working space (6) of the machine tool (9-14) in such a way that the tools (8') fastened on them come into engagement simultaneously on the cylinder head (3).

3. The machining system as claimed in claim 1 or 2, characterized in that the machine tools (9-14) of different machining stations (2a-2f) are identical in respect of their basic construction, but differ from one another in respect of the number and/or arrangement and/or dimensioning of the tool spindles (7,7') contained in them.

4. The machining system as claimed in one of the preceding claims, characterized in that the tool spindles (7,7') are fixed immoveably in the machine tools (9-14), so that all the relative movements of the cylinder head (3) in respect of the tools (8,8') are effected with the aid of the clamping device 5.